A CASE OF SULPHÆMOGLOBINÆMIA FOLLOWING THE ADMINISTRATION OF DRUGS OF THE SULPHONAMIDE GROUP

By F. F. KANE, M.D., M.R.C.P.I., D.P.H.
Purdysburn Fever Hospital, Belfast.

THE following case is worthy of note as an example of a possible, though rare, sequel to the administration of the sulphonamide group of drugs. The common preparations of these drugs are Prontosil (Bayer), Proseptasine (May & Baker), and Streptocide (Evans).

M. E. C., aged 21 years, unmarried, was admitted to Purdysburn Fever Hospital on 19th November, 1936, on the seventh day of puerperium following the normal delivery of a full-term infant.

On the fifth day of an apparently normal puerperium she had had a sharp rigor and vomited once; her temperature at that time is not reported. Next day she complained of sore throat, with a temperature of 104°. On the following day, with a persisting sore throat and malaise, and the development of a scarlatiniform rash on trunk and limbs, she had a temperature of 103.8°. She was given 30 c.c. scarlatina antitoxin intramuscularly before admission to this hospital.

On admission she had a scarlatiniform rash on her limbs only, temperature 102° and pulse 120; tongue dry and coated, and moderately congested fauces with palpable angular glands. She had a soft tender fundus at the umbilicus, with foul scanty lochia, and a perineal repair threatening to give way. Her right breast was engorged and tender.

From 20th November the patient was given Proseptasine tablets gm. 0.5 at the rate of two thrice daily, increased to four times daily on 21st. These were omitted on 23rd in favour of Prontosil tablets gm. 0.3 three thrice daily, increased on 24th to four times daily, and omitted entirely from 25th. In all she had twenty tablets of Proseptasine from 20th to 23rd and twenty-one tablets of Prontosil from 23rd to 25th. At the same time she was having an alkaline mixture of pot. cit. and pot. bicarb. of each 3 drahms daily; quinine and ergot; and two drahms of magnesium sulphate every morning from 20th November to 10th December.

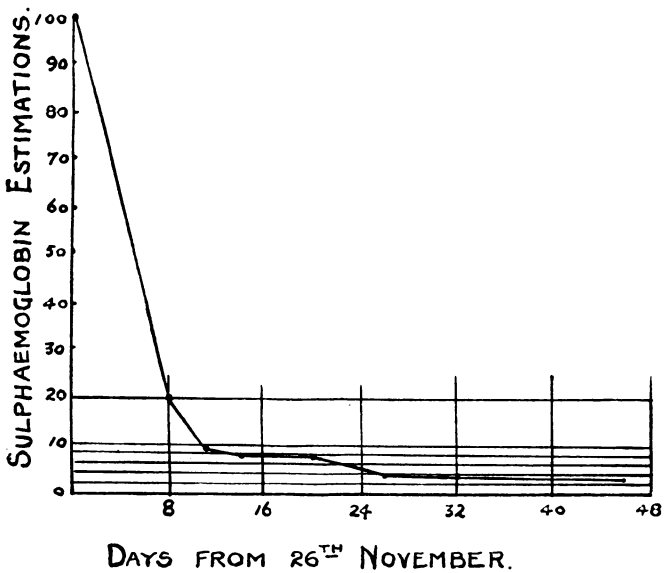
During the afternoon of 22nd November cyanosis of the features and extremities developed without any symptoms. This cyanosis increased steadily to a maximum on 26th November, and during this time the appearance of the patient, asleep or awake, suggested the imminence of death, but she was constantly bright and without any symptom attributable to the cyanosis. Dyspnœa was never present, and the cyanosis did not yield to oxygen administration. Her temperature became normal on 23rd November, and thereafter was only once above 98.4°, with the development of a serum rash on 30th November. Her pulse-rate whilst the cyanosis was maximal varied from 72 to 80. With the onset of cyanosis a small petechial spot appeared at the margin of the hair on

the forehead, and became necrotic, finally crusting to leave a superficial scar. The perineal sutures sloughed and were removed on 23rd November. The uterine condition became satisfactory, the lochia and involution behaving normally. Mastitis of the right breast progressed to abscess formation with discharge from 7th till 16th December. At no time was albuminuria present.

On 26th November the diagnosis of enterogenous cyanosis was made, and the following spectroscopic examinations on the patient's blood were carried out. Sulphæmoglobin was demonstrable spectroscopically in the patient's blood on 26th November, but was not present in her urine. Regarding the cyanotic condition as maximal clinically at that date, and taking the quantity of sulphæmoglobin then demonstrable at the optional figure of 100, the following estimations of the sulphæmoglobin were obtained subsequently :—

26/11/36	-	100.0	16/12/36	-	7.0
4/12/36	-	20.0	22/12/36	-	5.5
7/12/36	-	9.5	28/12/36	-	4.0
10/12/36	-	7.5	11/1/37	-	3.0

These figures are graphically appended and show an amazing lag in the elimination of sulphæmoglobin following a rapid diminution during the eight days between the first two estimations. Further estimations of sulphæmoglobin were rendered impossible, if not unnecessary, by the patient's discharge from hospital on 14th January, 1937. She had made a complete recovery, and was up and about from 14th December. There was no clinical evidence of cyanosis after 7th December, i.e., when the sulphæmoglobin had fallen to the figure of 9.5.



GRAPH OF SULPHÆMOGLOBIN ESTIMATIONS.

SUMMARY.

The development of symptomless cyanosis followed the administration of drugs of the sulphonamide groups. The simultaneous administration of magnesium sulphate is to be noted as a probable etiological factor. Colebrook[1], in his first series of forty cases, all of whom were taking magnesium sulphate, had three cases of sulphæmoglobinæmia. In his second series[2] of twenty-six cases similarly treated with Prontosil, but excluding magnesium sulphate, no case of cyanosis was observed. The possible association of magnesium sulphate with an azo dye in producing sulphæmoglobinæmia was mentioned by Van den Bergh and Revers.[3]

Recovery from the condition was spontaneous, and apparently no ill-effects result.

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REFERENCES.

1. COLEBROOK, L., and KENNY, M.: Lancet, 1936, i. 1,279.
2. COLEBROOK, L., and KENNY, M.: Ibid., 1936, ii. 1,319.
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CHILD OF FIVE YEARS WITH GALL STONES: REMOVAL OF SPLEEN AND GALL BLADDER

By IAN FRASER, M.D., M.CH., F.R.C.S.I., F.R.C.S.ENG.

MARY, aged five years, was the sixth child of a large family. Her siblings were normal, and the family history on both the maternal and paternal side was negative. She herself from the age of ten months had suffered from jaundice, off and on, and with varying intensity of colour.

She had exacerbations when this painless jaundice was very deep, but at all times her urine was free from bile. There was marked increase in the fragility of her red-blood cells, and she was in all respects a typical case of acholuric jaundice of the congenital variety, with absence of family or hereditary history. The spleen was moderately enlarged, painless, smooth, and freely mobile.

The operation of splenectomy was performed through a vertical incision along the outer border of the left rectus: this gives, I think, the best approach and allows rotation of the spleen more readily than the transverse incision used by some. As is usual in such cases, there were no adhesions; the spleen was easily exteriorized and the pedicle ligatured. The spleen enlarged four to eight times its normal size is always easier to remove than either the normal spleen or the giant enlargement, where almost the whole abdomen is filled. These moderate enlargements